



CERTIFICATE OF ANALYSIS N° PAN-9518

COMPANY : Refineria Panama S.A.
CLIENT ADDRESS : Bahia Las Minas, Colon, Panama
ATTENTION OF : Diego Pantoja

REFERENCE NO. : 902 MULTI PAN GOTLAND ALIYA
DISCHARGE
TANK : D-2172
DESCRIPTION : Composite After Discharge
SAMPLE LABEL/ID : 0059-2019
LOCATION : TCP - Las Minas, PAN
PRODUCT : ULSD

MOVEMENT : Discharge
SAMPLING DATE : 10-Feb-2019 17:10
RECEIVED DATE : 10-Feb-2019 19:10
TESTED DATE : 11-Feb-2019
REPORT DATE : 11-Feb-2019
DRAWN BY : Camin Cargo

Method	Description of Test	Result / Unit	Minimum	Maximum
D 4052-11	API Gravity @ 60°F	35.8 °API	32.0	
D 4176 (1)	Appearance	C&B		C&B
D 1500	ASTM Color	L1.0		2.5
D 93A	Flash Point	63.0 °C	60	
D 445	Viscosity @ 40 °C	2.758 cSt	1.9	4.1
D 86-12	Distillation			
	10%	404.0 °F		Report
	50%	518.0 °F		
	90%	628.0 °F	540	640
	10%	207.0 °C		Report
	50%	270.0 °C		
	90%	331.0 °C	282	338
	Final Boiling Point (End Point)	359.0 °C		Report
	Recovery	99.0 Vol. %		
	Residue	1.0 Vol. %		2
	Loss	1.0 Vol. %		2
D 976	Cetane Index	49.3	45	
D 2622	Sulfur	9.8 mg/kg		15
D 482	Ash	<0.001 Mass %		0.01
D 4530	Carbon Residue, Micro Carbon on 10% Bott.	<0.10 Mass %		0.3
D 2709	Sediment & Water	<0.010 Vol. %		0.05
D 130	Copper Corrosion @ 50 °C (3 hrs)	1a		2
D 2624	Electrical Conductivity	273 pS/m	25	
EN 14078-A	Fatty Acid Methyl Esters (FAME)	<500 ppm		1000

Samples taken as per Standard Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM D4057 / API MPMS Chapter 8.1)
All testing performed by Camin Cargo Control.

Certified that this sample meets the relevant specification with respect to the above tests as noted.

Lote: 0219LDO013
Volumen Total: 122,158.27 BBLs.
Volumen Disponible: 110,908.27 BBLs.



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Method	Description of Test	Result / Unit	Minimum	Maximum
D 6079	Lubricity - HFRR			
	Wear Scar Diameter @ 60° C	400 microns		520

Samples taken as per Standard Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM D4057 / API MPMS Chapter 8.1)
All testing performed by Camin Cargo Control.

Certified that this sample meets the relevant specification with respect to the above tests as noted.

Note: Test results reported are valid only for the indicated sample mentioned above.

All gauges, temperatures and volumes were obtained in accordance to the latest API and ASTM procedures.

Data contained in this report is Confidential to the addressee and should not be disclosed to any other party without approval of client(s).

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Boris Zorrilla / Laboratory Manager